Recipient Outcomes in Adult Living Liver Transplantation

Thesis

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6 MP	**:**	6- Mercaptopurine
AFP	**:**	Alpha fetoprotein
ALG	**:**	Anti Lymphocyte Globulin
AS	**:**	Anastomotic Stricture
AZA	**:**	Azathioprine
BCLC	**:**	Barcelona Clinic Liver Cancer Staging System
BMI	**:**	Body mass index
CIT	**:**	Cold ischemia time
CMV	**:**	Cytomegalovirus
CNIs	**:**	Calcineurin inhibitors
CT	**:**	Computed tomography
CTA	**:**	Computed tomography angioplasty
CYA	**:**	Cyclosporine
DDLT	**:**	Deceased-donor liver transplantation
DM	**:**	Diabetes mellitus
ELITA	**:**	European Liver and Intestine Transplant Association
ERCP	**:**	Endoscopic retrograde cholangiopancreatography
EVL	**:**	Everolimus
FKBP	**:**	FK binding protein
GRWR	**:**	Graft recipient weight ratio
HA	**:**	Hepatic artery
HAS	**:**	Hepatic artery stenosis

HAT	**:**	Hepatic artery thrombosis
HBV	**:**	Hepatitis B virus
HCC	**:**	Hepatocellular carcinoma
HCV	**:**	Hepatitis C virus
HLA	**:**	Human Leucocyte Antigen
HSV	**:**	Herps simplex virus
HTN	**:**	Hypertension
HVOB	**:**	Hepatic vein outflow block
IL 2	**:**	InterLeukin 2
ILTS	**:**	International Liver Transplant Society
INR	**:**	International Normalization Ratio
IVC	**:**	Inferior vena cava
LDLT	**:**	Living-donor liver transplantation
LFTs	**:**	Liver function tests
LT	**:**	Liver transplantation
MC	**:**	Milan Criteria
MELD	**:**	Model for End-stage Liver Disease
MHV	**:**	Middle hepatic vein
MMF	**:**	Mycophenolate mofetil
MPA	**:**	Mycophenolic acid
MPS	**:**	Mycophenolate sodium
MRA	**:**	Magnetic resonance angiography
MRCP	**:**	Magnetic resonance cholangiopancreatography
mTORi	**:**	Mammalian target of rapamycin inhibitor
NAS	**:**	Non Anastomotic Stricture

OLT	**:**	Orthotopic liver transplantation
PAI	**:**	Percutaneous Acetic acid injection
PEI	**:**	Percutaneous ethanol injection
PET	**:**	Positron emission tomography
PTA	**:**	Percutaneous Transluminal Angioplasty
PTC	**:**	Percutaneous Transluminal Cholangiography
PTLD	**:**	Post Transplant Lympho proliferative Disorder
PV	**:**	Portal vein
PVF	**:**	Portal vein Flow
PVP	**:**	Portal Vein Pressure
PVT	**:**	Portal vein thrombosis
RFA	**:**	Radiofrequency ablation
SAT	**:**	Systolic Ascending Time
SFSS	**:**	Small For Size Syndrome
SOD	**:**	Sphincter of Oddi Dysfunction
SRL	**:**	Sirolimus
TACE	**:**	Trans arterial chemoembolization
TARE	**:**	Trans arterial Radio embolization
TGF-B	**:**	Transforming Growth Factor B
UCSF	**:**	University of California San Francisco
UNOS	**:**	United Network for Organ Sharing
US	**:**	Ultrasound
WIT	**:**	Warm ischemia time

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INTRODUCTION

The liver is an important organ which performs complex functions including metabolism, synthesis and detoxification. Chronic liver disease is a multi factorial process leading to instability and derangement of essential functions. If not rapidly reversed, complications will lead to hepatic coma. With additional organ failure, recovery becomes irreversible and leads to a high patient mortality ***(Guba et al., 2010).***

Liver transplantation is an accepted management for end stage liver disease, early-stage hepatocellular carcinoma, and acute liver failure. The number of patients with end stage liver disease is growing rapidly. Living Donor Liver Transplantation (LDLT) has become an important alternative to cadaveric organ transplant for patients with end stage liver disease. LDLT has a good safety profile for donors with the median morbidity of 16% and the mortality of 0.2%. With the advantages over deceased donation such as shorter cold ischemia time, prescheduled procedure, and healthier liver grafts, LDLT may produce better recipient outcomes. Understanding donor and recipient outcomes is important. In addition, this information will help the transplant team improve their post operative management and plan for long-term follow-up after liver donation ***(Lee et al., 2009).***

As surgical techniques and postoperative managements continue to advance, the outcomes of LDLT have continued to improve. Patients considering LDLT should know whether the risk, severity of complications and long-term survival ***(Eguchi et al., 2008).***

Mortality from donation of the right lobe (0.23-0.5%) is potentially higher than that of left lobe donation (0.05-0.21%) and this is likely due to the extent of resection. Right lobe donation also has a greater incidence of complications ***(Freise et al., 2008).***

Bile leaks, biliary stricture and bilomas accounted for the majority of biliary tract complications. Postoperative biliary complications is commonly referred to as the ‘‘Achilles heel’’ of liver transplantation. Although recent advances in surgical procedures and graft preservation techniques have improved outcomes for biliary reconstruction of liver transplantation, biliary complications continue to be a major cause of morbidity among liver transplant recipients and are as high as 10% -60% ***(Hampe et al., 2006).***

Vascular complications are another common cause of morbidity of liver transplantation, especially hepatic artery problems. The literature reports the hepatic artery complication rate to be approximately 5%–16%. Due to the smaller vessel diameter, the insufficient length for reconstruction and the